

What is claimed is:

1. A filter cartridge comprising:

an upper shell portion having a first diameter and an upper surface defining an axial opening;

5 a lower shell portion having a second diameter and connected to said upper shell portion by a peripheral roll seam;

a filter element secured within said connected upper and lower shell portions; and

10 an elastomeric spring axially protruding from said upper surface an axial distance of at least one tenth (.1) of an inch.

2. The filter cartridge of claim 1, wherein said elastomeric spring is comprised of a polymer.

15 3. The filter cartridge of claim 2, wherein said polymer is selected from the group consisting of Buna N (nitrile) Rubber, VITON or fluorosilicone.

20 4. The filter cartridge of claim 2, wherein said polymer has a Shore "A" durometer hardness of between 55 and 75.

5. The filter cartridge of claim 1, wherein said elastomeric spring terminates in an axially projecting contact surface.

25 6. The filter cartridge of claim 1, wherein said elastomeric spring comprises a plurality of spring columns arranged around the axial opening in said upper surface.

30 7. The filter cartridge of claim 6, wherein said plurality of spring columns comprises between 6 and 24 spring columns.

8. The filter cartridge of claim 1, wherein said elastomeric spring has a range of deflection of at least one tenth (.1) of an inch over which said elastomeric spring produces an axial force of between 20 and 60 pounds.

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9. The filter cartridge of claim 1, comprising cartridge seal means for sealing said cartridge to a conduit received through said axial opening in said upper surface.

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10. The filter cartridge of claim 9, wherein said cartridge seal means and said elastomeric spring comprise a unitary molded component.

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11. A filter cartridge comprising:

an upper shell portion having a first diameter and an upper surface defining an axial opening;

a lower shell portion having a second diameter and connected to said upper shell portion to define an interior space;

a filter element secured in said interior space; and

a spring consisting essentially of polymer material axially protruding from said upper surface,

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wherein said spring has a range of deflection traversing an axial distance of at least one tenth (.1) of an inch over which said spring produces an axial force of between 20 and 60 pounds.

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12. The filter cartridge of claim 11, wherein said spring axially protrudes from said upper surface by a distance of at least one tenth (.1) of an inch.

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13. The filter cartridge of claim 11, wherein said polymer material is selected from the group consisting of Buna N (nitrile) Rubber, VITON, and fluorosilicone.

14. The filter cartridge of claim 11, wherein said spring terminates in an axially projecting contact surface.

5 15. The filter cartridge of claim 11, wherein said spring comprises a plurality of spring columns arranged around the axial opening in said upper surface.

10 16. The filter cartridge of claim 15, wherein said plurality of spring columns comprises between 6 and 24 spring columns.

17. The filter cartridge of claim 11, comprising cartridge seal means at said axial opening for sealing said cartridge to a conduit received therethrough.

15 18. The filter cartridge of claim 17, wherein said cartridge seal means and said spring comprise a unitary molded component.

19. The filter cartridge of claim 11, wherein said polymer material has a Shore "A" durometer hardness of between 55 and 75.